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MINNESOTA LABOR MARKET REVIEW

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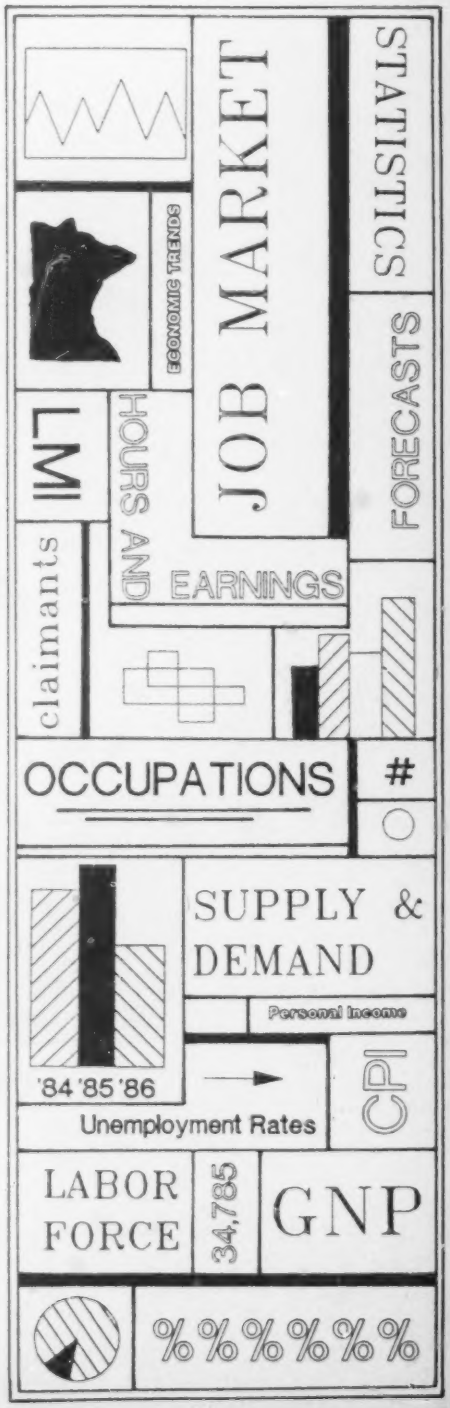

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The 26 page Minnesota Labor Market Review is published quarterly by the Research and Statistics Office of the Minnesota Department of Jobs and Training, 390 North Robert Street, St. Paul, Minnesota 55101. The 8 page Review is published during the other eight months. Copies are available without charge by writing the editor.

Articles on labor market conditions and the economic welfare of Minnesota workers or general economic conditions within the state are welcome. Articles should be submitted complete with tables and graphs. Length should not exceed 8 double-spaced typewritten pages, including graphs, references, and notes. The editorial board reserves the right to edit articles for length and clarity.

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Analysis of National & State Economic Conditions

Nation

State

By Ben Boyle

Unemployment Rate Dips Back To 14-year Low; Manufacturing Employment Rebounds As Payroll Employment Posts Strongest Increase Since June

The nation's seasonally adjusted unemployment rate fell from 5.4 percent in September to 5.3 percent in October, the same as during June and the lowest since May, 1974 when it was 5.1 percent. Seasonally adjusted nonfarm payroll employment rose a healthy 323,000 in October after a gain of 304,000 in September. The October increase was the biggest since a 568,000 jump in June. Even more significant, employment in surged by 99,000 in October after declines of 33,000 in August and 12,000 in September. The largest gains in factory jobs were in the nonelectrical machinery, transportation equipment, lumber and wood and food processing industries.

Other Indicators Also Show A Healthy Economy

Housing starts rose a strong 7.2 percent in October, the sharpest increase since February, and were at their highest level since April. Also, retail sales climbed a robust 0.9 percent after a drop of 0.3 percent in September. Moreover, industrial production increased 0.4 percent in October following a 0.2 percent gain in September. Meanwhile, personal income rose a very strong 1.8 percent in October, the biggest increase in a year, while personal spending climbed a healthy 0.8 percent.

Unemployment Rate Shows Normal Increase In October

Minnesota's seasonally adjusted unemployment rate rose 0.2 of point to 3.6 percent in October, the same as in August. The October increase was about normal for this time of the year. The rate had averaged 3.5 percent in the third quarter and 4.5 percent in the third quarter of 1987.

Payroll Employment Posts Huge Gain In October As Employment In Retail Trade And The Services Industry Rises Sharply

Seasonally adjusted nonfarm payroll employment rose a strong 11,200 in October after a gain of 4,020 in September. It was 60,650 or 3.1 percent higher than in October 1987. The October payroll employment increase was the biggest since a jump of 12,700 in October 1987. The largest over-the-month increase was 4,000 in retail trade with half of that increase in eating and drinking places. There were also sizeable job gains in general merchandise and food stores. The second biggest monthly increase was 3,500 in the services industry, particularly health and business services. Employment in manufacturing also grew strongly in October as both durable and nondurable goods industries registered big increases. The largest gains from a year ago were in services (21,700), total trade (19,800), and total manufacturing (11,800).

Labor Force and Establishment Data

	MINNESOTA (Numbers in Thousands)			UNITED STATES (Numbers in Thousands)		
	III QTR 1988	Percent Change from		III QTR 1988	Percent Change from	
		Last Qtr.	Year Ago		Last Qtr.	Year Ago
Labor Force Estimates						
Total Labor Force						
Actual	2,340.4	0.0	3.4	123,042	1.4	1.5
Seasonally Adjusted	n.a.	n.a.	n.a.	121,880	0.5	1.5
Employment						
Actual	2,258.1	0.0	4.5	116,426	1.4	2.1
Seasonally Adjusted	n.a.	n.a.	n.a.	115,189	0.5	2.1
Unemployment						
Actual	82.3	1.4	-19.4	6,617	0.6	-7.2
Seasonally Adjusted	n.a.	n.a.	n.a.	6,691	1.1	-7.1
Unemployment Rates						
Actual	3.5	0.0	-22.2	5.4	0.0	-8.5
Seasonally Adjusted	n.a.	n.a.	n.a.	5.5	0.0	-8.3
Other Rates of Labor Utilization						
Participation Rt. (Labor Force/Population (16+)	n.a.	n.a.	n.a.	65.9	0.2	0.5
Full Employment Deficit - Percent of Workers1/	-0.5	-0.5	0.5	1.4	1.4	1.9
Manpower Utilization Rate2/	84.2	0.4	0.1	83.9	0.0	0.6
Nonagricultural Wage & Salary Positions						
Employment (Seasonally adjusted)	2,025.4	0.8	3.1	106,469	0.8	3.7
Mining	7.0	10.9	9.8	736	-0.4	1.1
Construction	78.0	-1.6	-4.4	5,339	1.5	6.6
Manufacturing	389.1	0.7	3.8	19,574	0.4	2.4
Durables	232.0	1.1	4.7	11,556	0.6	2.9
Nondurables	157.1	0.0	2.5	8,018	0.0	1.8
Trans., Comm., & Public Utilities	102.1	0.6	1.3	5,608	0.9	3.9
Trade	505.7	1.2	3.5	25,476	0.9	4.1
Fin., Ins., & Real Estate	123.6	0.4	2.8	6,688	0.4	1.6
Services	498.4	1.3	4.4	25,630	1.4	5.2
Government	321.5	0.2	2.1	17,418	0.4	2.3
Average Weekly Hours (Seasonally adjusted)						
Mining	43.5	3.1	2.8	42.3	-0.5	0.0
Construction	38.6	-0.3	0.0	38.5	0.5	1.6
Manufacturing	41.3	1.7	0.7	41.1	0.0	0.5
Durables	42.4	1.9	0.7	41.8	-0.2	1.0
Nondurables	39.9	1.8	1.3	40.2	0.2	0.0
Trans., Comm., & Public Utilities	35.4	0.3	-4.6	39.4	0.0	0.5
Trade	29.4	0.0	0.0	31.3	0.0	-0.6
Fin., Ins., & Real Estate	n.a.	n.a.	n.a.	35.8	-0.3	-1.1
Services	n.a.	n.a.	n.a.	32.6	0.0	0.3
Average Hourly Wage						
Mining	12.99	1.9	0.9	12.69	1.0	2.0
Construction	15.57	-0.3	2.4	12.99	0.9	2.4
Manufacturing	10.51	-0.2	1.6	10.18	0.4	2.7
Durables	10.81	0.0	0.7	10.71	0.4	2.8
Nondurables	10.11	-0.5	2.8	9.46	0.9	2.7
Trans., Comm., & Public Utilities	12.64	0.2	0.3	12.37	0.9	2.6
Trade	7.80	-0.4	0.5	7.30	0.6	3.5
Fin., Ins., & Real Estate	n.a.	n.a.	n.a.	9.07	0.4	4.3
Services	n.a.	n.a.	n.a.	8.85	0.5	5.0

1/ Four percent is a generally agreed upon criteria for measuring full employment. It allows for the movement of persons between jobs. Labor Force Unemployment Rate less four percent, based on official estimates.

2/ Estimated worker hours expended in nonfarm payroll employment as a percent of potential worker hours assuming that each member of the nonfarm labor payroll labor force was employed at a standard rate of 40 hours per week.

Minnesota Nonfarm Wage & Salary Employment, Hours & Earnings

INDUSTRY	EMPLOYMENT1/ (thousands)			PERCENT CHANGE FROM		PRODUCTION WORKERS' HOURS & EARNINGS2/					
						Average Weekly Earnings		Av. Hourly Earnings		Average Weekly Hrs.	
	Oct. 1988	Sep. 1988	Oct. 1987	Sep. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987
Total Nonagricultural	2,068.3	2,052.2	2,007.3	0.8	3.0	-	-	-	-	-	-
Manufacturing	393.0	396.4	381.1	-0.9	3.1	436.65	430.35	10.65	10.42	41.0	41.3
Durable Goods	234.2	234.5	224.9	-0.1	3.1	451.52	458.38	10.88	10.76	41.5	42.6
Lumber and Furniture	23.1	23.8	22.0	-3.3	4.9	462.11	500.09	11.91	11.63	38.8	43.0
Stone, Clay and Glass	9.4	9.4	8.8	0.0	6.5	462.97	427.44	10.57	10.40	43.8	41.1
Primary Metals	7.2	7.3	6.5	-2.1	10.7	409.76	425.65	9.71	9.48	42.2	44.9
Fabricated Metals	33.6	33.8	33.9	-0.5	-0.9	508.29	514.84	12.16	11.89	41.8	43.3
Nonelectrical Machinery	81.6	82.0	79.3	-0.4	2.9	484.36	482.20	11.37	11.24	42.6	42.9
Office and Computing	38.7	39.1	39.0	-1.0	-0.8	517.73	549.94	11.74	12.14	44.1	45.3
Electrical Machinery	30.8	30.3	28.5	1.6	7.8	345.46	365.93	8.68	8.61	39.8	42.5
Transportation Equipment	10.6	10.5	10.1	1.5	5.4	529.64	524.45	12.12	12.14	43.7	43.2
Scientific Instruments	31.7	31.4	30.3	0.8	4.4	423.67	418.20	10.16	10.25	41.7	40.8
Misc. Manufacturing	6.2	6.0	5.5	4.8	14.3	430.08	394.71	10.24	9.77	42.0	40.4
Nondurable Goods	158.8	162.0	156.2	-1.9	1.7	418.54	395.21	10.36	9.98	40.4	39.6
Food and Kindred	47.0	49.8	47.2	-5.8	-0.5	400.18	353.76	9.35	8.80	42.8	40.2
Textiles and Apparel	4.9	4.9	5.0	-1.1	-1.2	296.84	267.89	7.71	7.26	38.5	36.9
Paper and Allied	32.6	32.6	32.4	-0.2	0.4	503.01	497.77	12.15	11.88	41.4	41.9
Printing and Publishing	47.3	47.4	45.6	-0.1	3.9	411.79	393.21	11.04	10.43	37.3	37.7
Chemicals and Petroleum	11.1	11.1	11.0	-0.1	0.9	499.60	474.81	12.49	11.93	40.0	39.8
Rubber, Plastic & Leather	16.0	16.1	15.1	-0.6	6.3	356.40	346.90	8.91	8.76	40.0	39.6
Nonmanufacturing	1,675.3	1,655.8	1,626.3	1.2	3.0	-	-	-	-	-	-
Mining	7.5	7.5	6.9	-0.7	7.6	561.57	552.53	12.88	12.79	43.6	43.2
Metal Mining	5.4	5.4	4.9	-0.2	10.4	586.87	597.37	13.68	13.86	42.9	43.1
Construction	87.7	89.9	92.5	-2.5	-5.2	632.26	604.40	15.65	15.34	40.4	39.4
Transp., Comm., Pub. Util.	104.4	104.1	102.5	0.3	1.9	-	-	-	-	-	-
Transportation	69.7	69.4	68.1	0.4	2.3	-	-	-	-	-	-
Trucking & Warehousing	26.5	26.5	26.7	-0.1	-1.0	436.82	416.07	12.81	12.06	34.1	34.5
Comm. & Public Util.	34.8	34.7	34.4	0.0	1.0	600.75	586.80	14.87	14.67	40.4	40.0
Trade	514.4	515.0	494.6	-0.1	4.0	236.02	232.55	7.92	7.83	29.8	29.7
Wholesale	126.2	126.5	122.3	-0.2	3.2	428.47	428.87	10.82	10.83	39.6	39.6
Retail	388.2	388.5	372.3	-0.1	4.3	179.69	176.46	6.68	6.56	26.3	26.9
Building Materials	17.9	18.1	17.4	-1.1	3.1	329.99	320.73	8.73	8.53	37.8	37.6
General Merchandise	59.2	56.8	55.6	4.1	6.3	161.41	148.75	6.38	5.95	25.3	25.0
Food Stores	52.2	52.2	49.5	0.1	5.4	191.95	194.70	6.98	7.08	27.5	27.5
Automotive	41.6	41.7	40.0	-0.3	4.1	317.94	327.24	9.11	8.99	34.9	36.4
Apparel	20.2	19.8	19.9	1.9	1.6	113.53	118.46	5.33	5.36	21.3	22.1
Home Furnishings	18.2	17.7	16.8	2.9	8.5	264.80	248.51	8.00	7.67	33.1	32.4
Eating and Drinking	129.3	132.9	124.6	-2.7	3.8	112.18	106.18	4.92	4.74	22.8	22.4
Fin., Insur., Real Estate	123.8	124.2	121.0	-0.3	2.3	-	-	-	-	-	-
Finance	56.8	56.6	56.0	0.2	1.3	-	-	-	-	-	-
Insurance	45.6	46.0	44.5	-0.8	2.4	-	-	-	-	-	-
Real Estate	21.4	21.6	20.4	-0.8	4.6	-	-	-	-	-	-
Services	507.5	506.7	485.6	0.2	4.5	-	-	-	-	-	-
Personal Services	26.6	26.2	25.6	1.5	3.9						
Business Services	102.8	102.4	95.1	0.4	8.1						
Repair Services	21.5	21.3	19.6	1.0	9.6						
Health Services	154.6	154.7	150.4	-0.1	2.8						
Hospitals	53.0	53.2	51.5	-0.3	2.9						
Nursing Homes	41.3	41.4	41.3	-0.3	-0.2						
Legal Services	15.0	14.9	14.3	0.0	4.5						
Private Education	27.6	23.7	26.7	16.8	3.7						
Government	330.0	308.4	323.1	7.0	2.1						
Federal	33.8	33.9	33.1	-0.2	2.1						
State	83.7	74.3	81.4	12.6	2.7						
Education	46.1	36.3	45.2	27.0	1.9						
Local	212.5	200.2	208.6	6.2	1.9						
Education	116.2	101.8	113.1	14.2	2.7						

1/ Totals may not add because of rounding.

2/ Average earnings data are on a "gross" basis and are derived from reports of payroll for full-time and part-time production or non-supervisory workers. The payroll is reported before deductions of any kind. Bonuses, retroactive pay, tips, payment in kind, and "fringe benefits" are excluded.

Analysis of Local Conditions

Minneapolis–St. Paul MSA

By Kevin Alaspa

The Unemployment Rate Rises Slightly In October

The unemployment rate in the Twin Cities metropolitan area rose two-tenths of a percent in October to 3.4 percent. The increase was a normal seasonal development, and was still below October, 1987's figure of 3.8 percent. Total employment rose 2.9 percent over the year, while unemployment declined 9.0 percent.

Nearly All Employment Growth Occurs In Nonmanufacturing Industries

Wage and salary employment increased by 8,700 in October, or by seven-tenths of a percent. Manufacturing employment was down by 1,400, due, in part, to a seasonal layoff in lumber and furniture manufacturing. Construction employment declined by 800 as some outdoor projects ended for the season. Retail trade increased slightly as businesses began to add employees for the holiday season, and further increases are anticipated in the following months. A seasonal decline of 1,900 workers occurred among eating and drinking establishments, notably those associated with summer recreation. Employment in the services industry declined by 1,800, particularly in business and personal services.

Government employment increased, as local school districts added 7,700 workers in October when the school year became fully operational.

In coming months, layoffs in industries such as construction should continue to moderately raise unemployment. Nevertheless, the holiday shopping season typically is responsible for six to seven thousand part-time and temporary retail trade jobs in the metro area between October and December.

Employment in the metro area should continue to grow for the foreseeable future. Moderate economic growth continues in the state, much of it driven by business activity in the Twin Cities. The result is gradual but steady growth in employment in many local industries.

Employment should follow normal seasonal trends for the next few months, with unemployment not likely to exceed normal winter totals.

Labor Force Estimates

AREA	EMPLOYMENT			UNEMPLOYMENT			UNEMP. RATE		
	Oct. 1988	Sep. 1988	Oct. 1987	Oct. 1988	Sep. 1988	Oct. 1987	Oct. 1988	Sep. 1988	Oct. 1987
Mpls.-St.Paul MSA*	1,351,389	1,345,674	1,312,677	47,495	44,037	52,166	3.4	3.2	3.8
REGION 11	1,268,703	1,263,539	1,232,878	44,619	41,444	48,926	3.4	3.2	3.8
Anoka	127,121	126,604	123,532	4,897	4,469	4,755	3.7	3.4	3.7
Carver	23,315	23,220	22,657	710	653	727	3.0	2.7	3.1
Dakota	133,700	133,156	129,924	4,985	4,464	5,266	3.6	3.2	3.9
Hennepin	610,392	607,907	593,156	21,256	20,220	23,307	3.4	3.2	3.8
Ramsey	275,874	274,750	268,083	9,286	8,668	11,294	3.3	3.1	4.0
Scott	27,428	27,317	26,654	1,072	985	1,206	3.8	3.5	4.3
Washington	70,873	70,585	68,872	2,413	1,985	2,371	3.3	2.7	3.3
Chisago	13,899	13,842	13,506	565	532	692	3.9	3.7	4.9
Isanti	11,986	11,937	11,648	473	386	516	3.8	3.1	4.2
Wright	31,735	31,604	30,837	1,132	1,061	1,241	3.4	3.2	3.9
St. Croix, WI	25,066	24,752	23,808	706	614	791	2.7	2.4	3.2
Bloomington	57,530	57,296	55,906	1,957	1,830	2,130	3.3	3.1	3.7
Minneapolis	212,822	211,956	206,813	8,606	8,101	9,274	3.9	3.7	4.3
St. Paul	146,457	145,860	142,321	5,747	5,293	7,229	3.8	3.5	4.8

* Chisago, Isanti and Wright counties are a part of the Minneapolis-St. Paul MSA, and are also included in Region 7.

Note: Add employment and unemployment to calculate civilian labor force.

Mpls.–St. Paul Nonfarm Wage & Salary Employment, Hours & Earnings

INDUSTRY	EMPLOYMENT1/ (thousands)			PERCENT CHANGE FROM		PRODUCTION WORKERS' HOURS & EARNINGS2/					
						Average Weekly Earnings		Av. Hourly Earnings		Average Weekly Hrs.	
	Oct. 1988	Sept. 1988	Oct. 1987	Sept. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987
Total Nonagricultural	1331.8	1323.1	1312.2	0.7	1.5	–	–	–	–	–	–
Manufacturing	261.6	263.0	257.3	-0.6	1.7	462.67	460.20	11.34	11.17	40.8	41.2
Durable Goods	163.9	164.9	159.9	-0.6	2.5	474.96	480.25	11.39	11.30	41.7	42.5
Lumber and Furniture	9.4	10.3	9.7	-8.5	-3.1	525.44	547.28	12.91	12.41	40.7	44.1
Stone, Clay and Glass	3.7	3.7	3.3	-0.2	10.2	535.95	465.38	11.99	10.35	44.7	42.5
Primary Metals	5.1	5.2	4.7	-1.8	8.2	411.08	412.67	9.56	9.15	43.0	45.1
Fabricated Metals	25.7	26.0	26.3	-0.9	-2.0	518.06	540.38	12.76	12.48	40.6	43.3
Nonelectrical Machinery	64.1	64.2	62.6	-0.2	2.4	494.06	495.92	11.68	11.56	42.3	42.9
Office and Computing	31.3	31.3	31.9	-0.2	-1.9	497.64	511.58	11.60	11.68	42.9	43.8
Electrical Machinery	16.9	16.8	16.3	0.8	3.6	362.00	376.58	9.05	9.23	40.0	40.8
Transportation Equipment	6.0	5.9	5.6	0.6	6.2	677.54	706.40	15.26	15.39	44.4	45.9
Scientific Instruments	29.5	29.3	27.9	0.6	5.6	428.28	426.71	10.32	10.51	41.5	40.6
Misc. Manufacturing	3.5	3.4	3.4	0.7	2.7	460.67	408.58	10.59	10.24	43.5	39.9
Nondurable Goods	97.7	98.1	97.3	-0.5	0.3	445.17	430.73	11.27	10.96	39.5	39.3
Food and Kindred	18.0	18.3	18.6	-1.3	-2.9	512.38	432.64	11.54	10.63	44.4	40.7
Textiles and Apparel	2.2	2.3	2.0	-0.4	9.6	254.52	259.86	7.07	7.10	36.0	36.6
Paper and Allied	24.8	24.9	25.1	-0.6	-1.3	471.14	463.05	11.72	11.49	40.2	40.3
Printing and Publishing	32.4	32.4	32.0	0.0	1.2	403.33	406.62	10.99	10.96	36.7	37.1
Chemicals and Petroleum	9.4	9.4	9.3	-0.5	1.2	557.00	519.55	13.96	13.12	39.9	39.6
Rubber, Plastic & Leather	10.9	10.9	10.4	-0.3	4.7	381.81	414.12	9.79	9.86	39.0	42.0
Nonmanufacturing	1070.3	1060.0	1055.0	1.0	1.5	–	–	–	–	–	–
Mining	0.6	0.6	0.6	-0.9	0.0	403.64	208.78	10.85	8.03	37.9	26.0
Construction	59.1	59.9	59.1	-1.3	0.1	659.12	638.46	17.12	16.67	38.5	38.3
Transp., Comm., Pub. Util.	72.5	72.1	71.5	0.5	1.4	–	–	–	–	–	–
Transportation	49.7	49.2	48.9	1.0	1.6	–	–	–	–	–	–
Trucking & Warehousing	16.0	15.9	16.6	0.3	-3.4	409.97	389.10	13.14	12.97	31.2	30.0
Comm. & Public Util.	22.8	22.9	22.6	-0.4	1.1	597.40	579.51	14.43	14.36	41.4	40.3
Trade	326.2	325.9	322.2	0.1	1.2	264.88	254.75	8.80	8.52	30.1	29.9
Wholesale	86.6	86.7	85.2	0.0	1.7	463.70	454.96	11.68	11.46	39.7	39.7
Retail	239.6	239.2	237.1	0.2	1.1	201.69	193.14	7.47	7.18	27.0	26.9
Building Materials	10.7	10.8	10.3	-0.5	4.7	385.10	344.39	10.38	9.54	37.1	36.1
General Merchandise	41.0	39.4	40.4	4.1	1.4	170.24	160.99	6.65	6.24	25.6	25.8
Food Stores	28.2	28.0	27.8	0.6	1.4	247.68	239.98	8.66	8.51	28.6	28.2
Automotive	23.8	23.8	23.4	-0.2	1.7	379.71	395.13	10.18	10.21	37.3	38.7
Apparel	13.0	12.8	13.4	1.9	-2.6	107.66	116.27	5.41	5.59	19.9	20.8
Home Furnishings	11.9	11.8	11.7	0.9	1.7	281.87	223.30	8.49	7.25	33.2	30.8
Eating and Drinking	79.7	81.6	79.3	-2.4	0.5	128.03	116.77	5.64	5.26	22.7	22.2
Fin., Insur., Real Estate	96.4	96.5	94.4	0.0	2.2	–	–	–	–	–	–
Finance	41.3	41.2	40.6	0.2	1.8	–	–	–	–	–	–
Insurance	38.3	38.4	37.5	-0.3	2.2	–	–	–	–	–	–
Real Estate	16.9	16.9	16.3	0.0	3.3	–	–	–	–	–	–
Services	336.1	337.9	330.2	-0.5	1.8						
Personal Services	18.4	18.4	17.9	-0.2	2.6						
Business Services	82.7	82.9	81.3	-0.3	1.7						
Repair Services	15.5	15.4	14.5	0.5	7.0						
Health Services	86.0	85.8	85.4	0.2	0.7						
Hospitals	30.6	30.6	31.0	0.1	-1.3						
Nursing Homes	21.7	21.6	22.2	0.6	-2.3						
Legal Services	11.8	11.9	11.3	-0.4	4.5						
Private Education	15.8	15.3	16.6	3.7	-4.7						
Government	179.1	167.1	177.0	7.2	1.2						
Federal	20.6	20.6	20.2	0.3	2.4						
State	54.9	50.2	53.4	9.5	2.7						
Education	30.6	24.8	29.9	23.4	2.2						
Local	103.6	96.3	103.4	7.5	0.2						
Education	56.0	48.3	55.9	16.0	0.1						

1/ Totals may not add because of rounding.

2/ Average earnings data are on a "gross" basis and are derived from reports of payroll for full-time and part-time production or non-supervisory workers. The payroll is reported before deductions of any kind. Bonuses, retroactive pay, tips, payment in kind, and "fringe benefits" are excluded.

Central and Northwest Minnesota

Labor Force Estimates

AREA	EMPLOYMENT			UNEMPLOYMENT			UNEMP. RATE		
	Oct. 1988	Sep. 1988	Oct. 1987	Oct. 1988	Sep. 1988	Oct. 1987	Oct. 1988	Sep. 1988	Oct. 1987
St. Cloud MSA*	93,304	91,891	89,821	3,705	3,741	4,240	3.8	3.9	4.5
REGION 1	42,442	41,863	41,095	2,173	2,345	2,304	4.9	5.3	5.4
Kittson	2,516	2,491	2,533	130	182	157	4.9	6.8	5.8
Marshall	4,879	4,760	4,607	388	406	419	7.4	7.9	8.3
Norman	3,644	3,558	3,596	160	178	190	4.2	4.8	5.0
Pennington	6,654	6,568	6,197	292	290	316	4.2	4.2	4.9
Polk	14,725	14,329	14,631	797	862	825	5.1	5.7	5.3
Red Lake	1,467	1,510	1,551	160	168	179	9.8	10.0	10.3
Roseau	8,557	8,647	7,980	246	259	238	2.8	2.9	2.9
REGION 2	30,733	31,705	28,616	1,543	1,422	1,884	4.8	4.3	6.2
Beltrami	16,113	16,242	15,127	698	634	859	4.2	3.8	5.4
Clearwater	3,315	3,393	3,174	304	292	342	8.4	7.9	9.7
Hubbard	7,144	7,690	6,482	357	318	415	4.8	4.0	6.0
Lake of Woods	1,791	2,049	1,623	61	63	126	3.3	3.0	7.2
Mahnomen	2,370	2,331	2,210	123	115	142	4.9	4.7	6.0
REGION 4	94,937	93,354	92,909	3,683	3,183	4,287	3.7	3.3	4.4
Becker	12,960	13,285	13,374	671	572	905	4.9	4.1	6.3
Clay	25,862	25,172	24,813	667	627	703	2.5	2.4	2.8
Douglas	14,146	14,059	14,415	603	466	666	4.1	3.2	4.4
Grant	2,863	2,765	2,786	119	122	157	4.0	4.2	5.3
Otter Tail	23,807	23,153	23,089	1,075	950	1,218	4.3	3.9	5.0
Pope	4,796	4,675	4,298	215	178	234	4.3	3.7	5.2
Stevens	5,059	4,816	4,914	148	104	201	2.9	2.1	3.9
Traverse	2,203	2,200	2,032	82	56	74	3.6	2.5	3.5
Wilkin	3,261	3,229	3,188	113	108	129	3.3	3.2	3.9
REGION 5	58,062	59,194	54,315	3,270	3,093	3,667	5.3	5.0	6.3
Cass	8,125	8,625	7,629	594	537	664	6.8	5.9	8.0
Crow Wing	20,956	22,033	19,712	1,066	972	1,224	4.8	4.2	5.8
Morrison	13,821	13,711	12,487	772	838	895	5.3	5.8	6.7
Todd	10,291	10,065	9,815	596	539	604	5.5	5.1	5.8
Wadena	4,869	4,820	4,673	242	207	280	4.7	4.1	5.7
REGION 6E	55,665	55,928	52,486	1,982	2,102	2,282	3.4	3.6	4.2
Kandiyohi	19,786	19,483	18,261	599	641	770	2.9	3.2	4.0
McLeod	17,641	16,765	16,800	537	607	614	2.9	3.1	3.5
Meeker	8,635	8,370	7,869	422	402	445	4.7	4.6	5.4
Renville	9,403	9,310	9,556	424	452	453	4.3	4.6	4.5
REGION 7E	50,854	50,641	48,557	2,385	2,206	2,729	4.5	4.2	5.3
Chisago	13,899	13,842	13,506	565	532	692	3.9	3.7	4.9
Isanti	11,986	11,937	11,648	473	386	516	3.8	3.1	4.2
Kanabec	5,590	5,674	5,479	353	332	397	5.9	5.5	6.8
Mille Lacs	9,517	9,547	8,445	425	410	460	4.3	4.1	5.2
Pine	9,862	9,641	9,479	569	546	664	5.5	5.4	6.5
REGION 7W	125,039	123,485	120,658	4,837	4,802	5,461	3.7	3.7	4.3
Benton	14,652	14,430	14,105	663	661	661	4.5	4.4	4.6
Sherburne	17,566	17,322	16,931	1,035	971	861	5.6	5.3	4.8
Stearns	61,064	60,139	58,785	1,967	2,109	2,698	3.2	3.4	4.4
Wright	31,735	31,604	30837	1,132	1,061	1241	3.4	3.2	3.9

* Benton, Stearns, and Sherburne counties

Note: Add employment and unemployment to calculate civilian labor force.

ST. CLOUD MSA NONFARM WAGE & SALARY EMPLOYMENT

INDUSTRY	EMPLOYMENT			PERCENT CHANGE FROM	
	OCT. 1988	SEPT. 1988	OCT. 1987	MONTH AGO	YEAR AGO
Total Nonagricultural Wage & Salary	73,800	72,563	71,452	1.7	3.3
Total Manufacturing	12,811	12,696	12,001	0.9	6.7
Durable Goods	7,328	7,157	6,757	2.4	8.5
Nondurable Goods	5,483	5,539	5,244	-1.0	4.6
Total Nonmanufacturing	60,989	59,867	59,451	1.9	2.6
Construction & Mining	4,100	4,218	4,328	-2.8	-5.3
Transp., Comm., & Pub. Utilities	3,657	3,677	3,382	-0.5	8.1
Trade	22,782	22,775	21,527	0.0	5.8
Wholesale Trade	3,675	3,645	3,487	0.8	5.4
Retail Trade	19,107	19,130	18,040	-0.1	5.9
Finance, Insur., & Real Estate	2,429	2,433	2,368	-0.2	2.6
Services	15,208	14,908	14,630	0.8	2.7
Health Services	5,139	5,139	5,018	0.0	2.4
Other Services	9,889	9,769	9,612	1.2	2.9
Government	12,993	11,856	13,216	9.6	-1.7

By Ron Daws

The St. Cloud MSA's 3.8 Percent October Unemployment Rate Is Lowest Since Equalled In October 1978

While unemployment in most of Central and Northwest Minnesota fell to the lowest levels in a decade, employment rose to all-time highs. Not since October 1978, for example, has the St. Cloud MSA's unemployment rate been as low as 3.8 percent. Last October the MSA's rate was 4.5 percent.

Employment in the MSA, meanwhile, climbed to 93,304 in October, 1,413 above September's level, 3,483 above last October's level, and second only to last May's record of 93,676 jobs. Never has the number of jobs in the St. Cloud MSA been greater during October.

The St. Cloud MSA's October nonfarm payroll employment, at 73,800, reached an all-time high. There were 1,237 more jobs than during September, and 2,348 more than during October last year. Back in January 1988, the over-the-year increase was 4,377. That margin over 1987 has gradually diminished all year to nearly half, or the 2,348 mentioned above. Whether the increase will eventually be entirely obliterated remains to be seen.

Again it was manufacturing that gained the most jobs over the year, 6.7 percent to 2.6 percent for nonmanufacturing. Durable goods producing jobs rose almost twice as fast as as did nondurable goods manufacturing jobs. There were slightly fewer construction jobs, and government employment dropped slightly. Notable job gainers were transportation, communications and public utilities (up 8.1%), durable goods manufacturing (up 8.5%), trade (up 5.8%), and nondurable goods manufacturing (up 4.6%).

Northeast Minnesota

By Ron Daws

Unemployment Is Down Over The Year, But Up Over The Month

In Region 3 (including Duluth) unemployment dropped by 1.9 percentage points over the year (from 7.5 to 5.6 percent), but rose slightly over the month. Duluth's rate fell by 0.9 percentage points, from 6.2 to 5.3 percent over the year. Over the month, however, unemployment rose: from 5.3 to 5.6 percent for Region 3, and from 5.2 to 5.3 percent for Duluth.

Employment, meanwhile, moved conversely: up over the year, and down over the month. The drop over the month was minute, only 13 jobs, which for these estimates is not statistically significant. Over the year, however, jobs rose by 917, a 2.6 percent increase. Never since October 1981 has there been more jobs in Duluth.

Unlike total employment, nonfarm payroll employment slipped slightly over the year (by 0.1%), and rose over the month (by 1.4%). The big job losers over the year in Duluth were construction (down 1,452 jobs or 27.8%) and durable goods manufacturing (down 150 jobs or 9.2%). Transportation, communications and public utilities also lost 5.6 percent of its workers over the year. No industry gained a large nomber of jobs over the year. Government rose by 3.7 percent (383 jobs), and health services added 298 (up 5.6%).

At the beginning of 1988, nonfarm payroll employment in Duluth was about 600 workers below that of comparable months of 1987. During the last three months the number of jobs has remained virtually the same. Whether this signals that employment in Duluth is slowly entering an upswing will have to be watched in comming months. Surely with the unemployment rate hovering between 5.0 and 5.5 percent for the last seven months, and winter approaching, it would seem that the only direction the rate can go is up.

Labor Force Estimates

AREA	EMPLOYMENT			UNEMPLOYMENT			UNEMP. RATE		
	Oct. 1986	Sep. 1988	Oct. 1987	Oct. 1988	Sep. 1988	Oct. 1987	Oct. 1988	Sep. 1988	Oct. 1987
REGION 3	131,829	132,424	126,936	7,860	7,431	10,345	5.6	5.3	7.5
Aitkin	4,958	4,912	5,027	329	304	414	6.2	5.8	7.6
Carlton	11,903	11,935	11,516	705	690	884	5.6	5.5	7.1
Cook	2,765	3,090	2,463	159	91	186	5.4	2.9	7.0
Itasca	16,561	16,720	15,707	1,116	1,035	1,327	6.3	5.8	7.8
Koochiching	7,556	7,656	6,974	415	407	510	5.2	5.0	6.8
Lake	3,760	3,776	3,066	344	327	496	8.3	8.0	13.9
St. Louis	84,304	84,335	82,181	4,792	4,577	6,528	5.4	5.1	7.4
City of Duluth	36,389	36,402	35,472	2,019	2,010	2,342	5.3	5.2	6.2
Balance St. Louis	47,915	47,933	46,709	2,773	2,567	4,186	5.5	5.1	8.2

Note: Add employment and unemployment to calculate civilian labor force.

DULUTH AND DULUTH-SUPERIOR MSA NONFARM WAGE & SALARY EMPLOYMENT

INDUSTRY	EMPLOYMENT DULUTH			PERCENT CHANGE		EMPLOYMENT DULUTH-SUPERIOR			PERCENT CHANGE	
	OCT. 1988	SEPT. 1988	OCT. 1987	MO. AGO	YR. AGO	OCT. 1988	SEPT. 1988	OCT. 1987	MO. AGO	YR. AGO
Total Nonfarm Wage & Salary	44,717	44,083	44,471	1.4	0.1	91,364	90,690	91,141	0.1	0.2
Total Manufacturing	3,813	3,769	3,990	1.2	-4.4	7,856	7,835	7,700	0.3	2.0
Durable Goods	1,475	1,466	1,625	0.6	-9.2	4,208	4,138	4,093	1.7	2.8
Nondurable Goods	2,338	2,303	2,365	1.5	-1.1	3,648	3,697	3,607	-1.3	1.1
Total Nonmanufacturing	40,904	40,314	40,751	1.5	0.4	83,508	82,855	83,441	0.8	0.1
Construction	3,762	3,919	5,214	-4.0	-27.8	3,762	3,919	5,214	-4.0	-27.8
Transp., Com., Pub. Util.	2,837	2,847	3,006	-0.4	-5.6	6,130	6,163	5,933	-0.5	3.3
Total Trade	11,305	11,282	11,287	0.2	0.2	21,976	21,929	22,118	0.2	-0.6
Wholesale Trade	1,643	1,643	1,661	0.0	-1.1	3,623	3,538	3,535	2.4	2.5
Retail Trade	9,662	9,639	9,626	0.2	0.4	18,353	18,391	18,583	-0.2	-1.2
Finan., Insur., Real Est.	1,846	1,864	1,826	-1.0	1.1	3,230	3,280	3,130	-1.3	3.4
Services, Mining, & Misc.	12,446	12,448	12,104	0.0	2.8	26,140	26,477	24,969	-1.3	4.7
Health Services	5,641	5,604	5,343	0.7	5.6	9,133	9,107	8,584	0.3	6.4
Other Services	5,837	5,856	5,887	-0.3	-0.8	10,516	10,746	10,264	-2.1	2.5
Government	10,810	10,264	10,427	5.3	3.7	22,264	21,087	22,077	5.6	0.8

Southern Minnesota

By Sue Borgfelt

Labor Force Estimates

AREA	EMPLOYMENT			UNEMPLOYMENT			UNEMP RATE		
	Oct 1988	Sep 1988	Oct 1987	Oct 1988	Sep 1988	Oct 1987	Oct 1988	Sep 1988	Oct 1987
REGION 6W	24,449	23,831	23,709	903	791	1,051	3.6	3.2	4.2
Big Stone	2,974	2,940	2,812	126	112	132	4.1	3.7	4.5
Chippewa	6,609	6,431	6,571	293	234	255	4.2	3.5	3.7
Lac Qui Parle	4,232	4,153	4,043	127	104	142	2.9	2.4	3.4
Swift	4,904	4,693	4,663	173	183	247	3.4	3.8	5.0
Yellow Medicine	5,730	5,614	5,620	184	158	275	3.1	2.7	4.7
REGION 8	60,612	59,814	57,837	2,284	2,102	2,357	3.6	3.4	3.9
Cottonwood	6,076	5,960	5,954	280	312	403	4.4	5.0	6.3
Jackson	5,165	5,005	4,957	243	250	409	4.5	4.8	7.6
Lincoln	3,281	3,229	3,285	135	108	113	4.0	3.2	3.3
Lyon	12,171	12,139	11,812	497	432	411	3.9	3.4	3.4
Murray	4,789	4,717	4,585	233	190	184	4.6	3.9	3.9
Nobles	11,047	10,825	10,084	246	318	338	2.2	2.9	3.2
Pipestone	5,581	5,729	5,207	298	134	98	5.1	2.3	1.8
Redwood	7,831	7,668	7,406	225	232	250	2.8	2.9	3.3
Rock	4,671	4,537	4,547	127	126	151	2.6	2.7	3.2
REGION 9	107,469	109,363	104,364	3,540	3,358	4,456	3.2	3.0	4.1
Blue Earth	28,362	27,845	27,115	660	631	764	2.3	2.2	2.7
Brown	13,466	13,754	13,238	494	375	533	3.5	2.7	3.9
Faribault	7,920	8,109	7,651	328	339	310	4.0	4.0	3.9
Le Sueur	10,311	11,659	9,718	585	567	771	5.4	4.6	7.4
Martin	11,228	11,113	11,952	465	479	812	4.0	4.1	6.4
Nicollet	14,541	14,275	13,901	363	351	460	2.4	2.4	3.2
Sibley	6,604	6,764	6,459	289	234	321	4.2	3.3	4.7
Waseca	9,156	9,913	8,905	230	231	334	2.5	2.3	3.6
Watonwan	5,881	5,931	5,425	126	151	151	2.1	2.5	2.7
REGION 10	220,773	220,771	210,445	6,918	6,384	8,858	3.0	2.8	4.0
Dodge	8,105	8,073	7,586	322	292	409	3.8	3.5	5.1
Fillmore	9,767	9,511	9,705	336	357	442	3.3	3.6	4.4
Freeborn	17,339	17,401	16,372	625	508	779	3.5	2.8	4.5
Goodhue	20,446	20,417	19,903	728	592	836	3.4	2.8	4.0
Houston	9,431	9,288	8,613	265	245	304	2.7	2.6	3.4
Mower	16,640	16,524	16,599	548	487	691	3.2	2.9	4.0
Olmsted	58,525	58,973	56,430	1,552	1,440	2,172	2.6	2.4	3.7
Rice	27,956	27,790	25,632	997	870	1,125	3.4	3.0	4.2
Steele	15,966	16,093	15,516	454	558	658	2.8	3.4	4.1
Wabasha	9,074	9,336	8,449	328	284	414	3.5	3.0	4.7
Winona	27,524	27,365	25,640	763	751	1,028	2.7	2.7	3.9
Rochester City	36,190	36,467	34,894	1,196	1,081	1,529	3.2	2.9	4.2

ROCHESTER MSA NONAGRICULTURAL WAGE & SALARY EMPLOYMENT

INDUSTRY	EMPLOYMENT			PERCENT CHANGE FROM	
	October 1988	September 1988	October 1987	Month Ago	Year Ago
Total Nonagricultural Wage & Salary	59,711	59,803	57,611	-0.2	3.6
Total Manufacturing	11,266	11,463	10,718	-1.9	4.9
Durable Goods	9,472	9,473	8,935	0.0	6.0
Nondurable Goods	1,774	1,990	1,783	-10.9	-0.5
Total Nonmanufacturing	48,465	48,340	46,893	0.3	3.4
Construction & Mining	2,097	2,111	2,111	-0.7	-0.7
Transp., Comm., & Public Util.	1,696	1,726	1,684	-1.7	0.7
Total Trade	11,751	11,733	11,520	0.2	2.0
Wholesale Trade	1,276	1,306	1,260	-2.1	1.4
Retail Trade	10,473	10,427	10,260	0.4	2.1
Finan., Insur., & Real Estate	1,653	1,675	1,544	-1.3	7.1
Total Services	25,093	25,091	23,970	0.0	4.6
Health Services	17,778	17,697	16,833	0.5	5.6
Other Services	7,305	7,394	7,137	-1.2	2.4
Government	6,185	6,004	6,064	3.0	2.0

Unemployment Rises Over The Month Across All Regions

Unemployment rates rose over the month in each region. Some of the increase in unemployment can be attributed to temporary shutdowns or seasonal layoffs. In each region and within most counties, the rates were still lower than a year ago, down from an average of 4.0 percent to an average of 3.2 percent. The labor force and employment levels were, with a few exceptions, generally up over the month in Regions 6W, 8 and parts of Region 10, and down in Region 9 and some of Region 10.

Nonfarm employment in the Rochester MSA decreased 0.2 percent over the month, a relatively small normal September-to-October drop. Nondurable goods manufacturing lost 216 workers (10.9%), and nonmedical services dropped 89 jobs (1.2%). All industries except retail trade, health services, and government likewise employed fewer workers than last month.

Despite losses over the month, this October there were 3.6 percent more jobs than last October. Health services added the most new workers (945, a 5.6 percent gain) and durable goods manufacturing added 537 jobs (an increase of 6.0 percent). Employment in finance, insurance and real estate grew by 7.1 percent, for an additional 109 jobs. Nondurable goods manufacturing and construction, together losing 25 jobs, were the only industries with fewer employees than last year. In July, both these industries employed more workers than the last July.

Health services employment in Rochester has increased by 48.0 percent since October 1978, and 20.9 percent since October 1983. The 5.6 percent gain since last October is the third-highest October-to-October jump since 1975, which is as far back as records date. From October 1986 to 1987, health services employment increased by 6.7 percent, and from October 1979 to 1980, it grew 6.3 percent.

Research Summaries

By Bruce Steuernagel

Now that the 1988 **Minnesota Salary Survey** has been published, this Research Summary updates a historical series of occupational wages we periodically discuss in the Review.

The table on the following page shows median hourly wages for 18 occupations for which data has been collected annually since 1970. The occupations are ranked in order of 1988 wage level. Annual percent change in wages is compared with the rate of inflation as measured by the Consumer Price Index.

Between 1970 and 1988, wage increases lagged slightly behind inflation. As the table shows, most of the shortfall occurred during the period of very high inflation from 1978-1982.

Since 1982, rates of inflation and wage increase dropped to about one-third the 1978-1982 rate. Although the rate of change is based on only a small number of occupations, it appears that wage increases have equaled or slightly exceeded price inflation during the past six years, 3.4 percent compared to 2.8 percent. From 1982 to 1986, wage rate increases exceeded inflation, 3.7 percent to 2.5 percent.

During the past two years, wage rates for the 18 occupations grew slightly slower than inflation, 2.8 percent versus 3.5 percent. However, the change between 1986 and 1988 in the median hourly wage for a composite of 73 comparable occupational titles showed that wage rates increased by 3.5 percent annually. Thus wage growth rates estimated from the **Minnesota Salary Survey** for the past two years are in line with the estimates of grow rates for wages and salaries paid to workers in the private sector from the Bureau of Labor Statistics' Employment Cost Index (ECI). According to the ECI, wages and salaries for private sector workers rose at an annual rate of 3.3 percent from the second quarter of 1986 to the second quarter of 1988.

When the 18 occupations were ranked by growth rate over the past two years, the top five on the list were registered nurses, heavy equipment operators, typist II, welders, and clerk III. The rate increases for heavy equipment operators and welders appears to reflect the increased demand for labor from the construction and manufacturing sectors during the past two years over the 1982-1986 period during which their was a general surplus of labor in these occupations. Then, labor unions which typically represent a good number of workers in occupations such as heavy equipment operators, negotiated for job security over wage increases. Wage freezes, roll-backs, or very modest wage increases were common. One could also assume that above average growth rates for clerical occupations and registered nurses also reflect strong demand for these skills as well as some shortage of workers with them.

The 1988 **Minnesota Salary Survey** collected data on 174 occupations between February and May 1988. Questionnaires were mailed to a total of 5,592 employers throughout the state. Responses were received from 3,277 employers or 58.6 percent. The data is reported for the state and six substate regions.

Median Hourly Wages and Annual Average Percent Change for
Selected Occupations in Minnesota, 1970-1988

OCCUPATIONAL GROUP	MEDIAN HOURLY WAGE						ANNUAL PERCENT CHANGE (COMPOUNDED)					
	1970	1974	1978	1982	1986	1988	1970-74	1974-78	1978-82	1982-86	1986-88	1970-88
EDP Programmer II	5.94	6.75	8.43	11.11	14.57	15.43	3.2	5.7	7.1	7.0	2.9	5.4
Accountant II	5.22	7.21	8.78	12.02	14.61	14.96	8.4	5.0	8.2	5.0	1.2	6.0
Heavy Equipment Operator	4.01	5.63	7.43	11.07	11.61	13.72	8.9	7.2	10.5	1.2	8.7	7.1
Registered Nurse (Hosp)	4.02	4.62	6.14	9.45	10.90	13.17	3.5	7.4	11.4	3.6	9.9	6.8
Maintenance Machinist	4.39	5.20	7.50	10.10	12.00	12.00	4.3	9.6	7.7	4.4	0.0	5.7
Medical Technologist (Hosp)	4.10	5.01	6.38	8.89	11.08	11.94	5.1	6.2	8.6	5.7	3.8	6.1
Auto Mechanic	3.82	4.87	6.53	11.00	12.36	11.21	6.3	7.6	13.9	3.0	-4.8	6.2
Electronics Technician	3.89	4.19	6.21	8.87	10.39	11.15	1.9	10.3	9.3	4.0	3.6	6.0
Welder	3.50	4.27	6.35	9.13	9.62	10.78	5.1	10.4	9.5	1.3	5.9	6.4
Clerk III	3.10	3.55	4.96	6.97	8.12	8.94	3.4	8.7	8.9	3.9	4.9	6.1
Typist II	2.36	2.83	4.15	5.77	7.09	8.20	4.6	10.0	8.6	5.3	7.5	7.2
Accounting Clerk	2.60	3.00	4.00	5.63	6.88	7.53	3.6	7.5	8.9	5.1	4.6	6.1
Laborer	3.03	3.54	4.69	7.10	8.18	7.38	4.0	7.3	10.9	3.6	-5.0	5.1
Deliveryperson	3.86	4.50	5.00	6.75	7.01	7.00	3.9	2.7	7.8	0.9	-0.1	3.4
Janitor	2.80	3.63	4.85	6.29	6.74	6.92	6.7	7.5	6.7	1.7	1.3	5.2
Receptionist	2.31	2.74	3.65	5.11	5.95	6.40	4.4	7.4	8.8	3.9	3.7	5.8
Sewing Machine Operator	2.02	2.50	3.44	5.00	4.93	5.30	5.5	8.3	9.8	-0.4	3.7	5.5
Guard	1.96	2.30	3.15	4.76	5.51	5.00	4.1	8.2	10.9	3.7	-4.7	5.3
Average Median Survey Wage	3.50	4.24	5.65	8.06	9.31	9.84	4.9	7.4	9.3	3.7	2.8	5.9
CPI-W Mpls-St.Paul MSA (First-half Year Average) 1976=100	115.6	142.7	194.8	303.4	334.5	358.0	5.4	8.1	11.7	2.5	3.5	6.5

SUPPLY/DEMAND FOR SPECIFIC OCCUPATIONS, NOVEMBER 1988

By Mike Casey

	SHORTAGE OCCUPATIONS*	SURPLUS OCCUPATIONS
MINNESOTA:	food service workers# retail clerks# skilled trades (electricians, carpenters)# nursing (RN, LPN, aides)# truck drivers (over the road)#	clerical (inexperienced)# general laborers# factory workers# construction laborers#
CENTRAL MINNESOTA:	food service workers# nursing (RN, LPN, aides) truck drivers (over the road)	clerical (inexperienced)# factory workers
MINNEAPOLIS-ST. PAUL:	clerical (experienced)# food service workers# retail sales truck drivers (over the road)	electronics assemblers# warehouse workers# managers clerical (inexperienced)
NORTHEASTERN MINNESOTA:	food service workers# nursing (RN, LPN, etc.)# plant electricians electronic technicians	clerical (inexperienced)# general laborers
NORTHWESTERN MINNESOTA:	food service workers# nursing (RN, LPN)# truck drivers (over the road) automotive mechanics	construction laborers clerical (inexperienced)# factory workers#
SOUTHERN MINNESOTA:	food service workers# truck drivers (over the road) retail clerks# nursing (RN, LPN)#	clerical (inexperienced)# general laborers# construction laborers#

* Shortage occupations are those that are difficult to fill or go unfilled due to the lack of qualified applicants. Surplus occupations are those in which the number of qualified applicants greatly exceeds the number of openings.

\# This occupation has been listed as a shortage or surplus occupation in at least two out of the last three quarters of the Review.

Forecasts of GNP & Minnesota Payroll Employment

For the third quarter of 1988, real GNP grew at an annual rate of 2.6 percent, and total Minnesota non-farm payroll employment grew at 3.2 percent.

Our forecasts show Real GNP and Minnesota employment trending toward slower growth. The declines are consistent with those presented one quarter ago. This is shown as entry 88:4 in the table to the right.

Since the great inflation of the late seventies, national economic policy has been anti-inflationary rather than pro-growth. The last several quarters have seen expectatons of inflation, and policy has responded with higher interest rates. Interest rates on 91 day treasury bills show 5.70, 6.23 and 6.99 percent in the first, second and third quarter.

Forecast Trends of One Year Growth Rates

	Real GNP		MN. Employment	
First Period	First Yr. Out	Second Yr. Out	First Yr. Out	Second Yr. Out
87:4	5.37	2.27	5.11	3.80
88:1	5.05	2.90	4.75	3.87
88:2	5.16	3.06	4.81	4.08
88:3	4.83	3.02	4.58	4.00
88:4	4.18	2.71	3.96	3.44

Thus the slower growth trends thus can be seen as the effect of policy rather than indications of more precipitous declines to come. The future depends on a continuation of judicious policy and the absence of unexpected shocks.

By Charles Cline

Quarter	Real GNP (Billions of 1972 Dollars)	MINNESOTA PAYROLL EMPLOYMENT, BY QUARTER (In Thousands)								
		Total Nonagricultural Wage & Salary	Mining	Contract Construction	Manufacturing	Transportation, Communications, & Public Utilities	Retail and Wholesale Trade	Finance, Insurance, & Real Estate	Services	Government
Current										
1988:3	4,010.90	2,037.90	7.53	89.89	396.78	101.93	513.22	124.75	503.46	300.35
Forecasts										
1988:4	4,055.83	2,063.58	7.09	85.57	389.82	105.21	514.77	124.32	509.09	329.91
1989:1	4,100.32	2,014.43	6.59	64.04	384.68	102.28	496.77	124.46	504.55	331.18
1989:2	4,149.28	2,087.60	7.51	80.64	393.39	104.41	517.66	126.96	521.86	335.05
1989:3	4,189.04	2,114.77	7.61	94.83	411.62	105.03	526.39	128.72	528.39	308.16
1989:4	4,225.45	2,145.34	7.16	88.44	407.46	108.42	532.94	128.40	534.23	337.41
1990:1	4,258.50	2,092.20	6.71	65.74	403.24	105.50	514.21	128.55	529.54	338.59
1990:2	4,287.54	2,166.24	7.66	82.43	411.41	107.79	535.82	131.15	548.27	342.33
1990:3	4,314.05	2,193.61	7.70	96.32	429.06	108.48	542.24	133.01	553.28	316.53
1990:4	4,340.00	2,219.17	7.20	88.81	422.39	111.46	549.15	132.68	559.02	345.41

Notes

1. These forecasts are produced using the Vector Autoregression Model Developed for Research by Rao Aiyagari.
2. The concept of employment forecasted is that of Nonagricultural Wage and Salary employment. The count represents the number of jobs held since the data is generated from a survey of employer payroll records. Groups included in labor force employment, but excluded here are the self employed, domestics, unpaid family workers.
3. Employment forecasts are seasonally unadjusted values. Real GNP is seasonally adjusted.
4. Forecasts of major industry employment do not sum to the forecast of total wage and salary employment. This is due to random error in the forecasted values.
5. There is great diversity in the accuracy of the forecasts among the major industry divisions, especially mining. More information on their accuracy can be obtained from the author on request.

Minnesota Economic Indicators

By Wilber Maki and Peter Stenberg 1/

Beyond the splashy, attention-getting measures of unemployment and employment, and other macro measures, planners and policy makers, people in business and industry, and economists need a single or set of a few indicators to understand the status of economic health. As used and relied upon as is the unemployment rate, for example, it lacks scope as an overall economic indicator. Therefore, indicators which combine several economic measures are produced to summarize current conditions in state and local economies. They serve as an early warning system of imminent changes in state and regional business conditions. Over the years, various economic indicators have been developed and discontinued for one reason or another. Until now, an index of coincident indicators did not exist. Only a leading indicator was available to summarize the activities of the state as a whole.

The U.S. indicators were the prototype for the state and regional indicators, but the Minnesota economic indicators must differ from those of the U.S. simply because Minnesota's economy does not function like the U.S.'s. Minnesota's unique industry mix is more heavily weighted toward durable goods manufacturing which tends to be highly cyclically sensitive. Even if the state's and U.S.'s economies were identical, geographical scale of activity alone would preclude the preperation of individual state and local indicator series that are comparable with the U.S. series.

The current U.S. economic indicator series includes 11 leading, four roughly coincident, and six lagging indicators. Leading indicators try to predict developments before they occur. The 11 leading indicators have anticipated the four recessions that struck during the past 20 years by an average of 8.5 months. But this series has also given numerous false starts to recessions that never took place. Many economists would like to see the 11-indicator series modified and improved. The main difficulty with the current leading indicator index is that because of the fast-moving economy, much of the input data available appears to need major redevelopment. The biggest problem is that most of the 11 series used in the index of leading indicators currently focus on too heavily on the goods-producing sectors of the economy. To correct that, the new U.S. indicator series would be more heavily weighted toward the service sector.

State and Regional Economic Indicators

Several state and regional economic indicators are now widely published by university bureaus of business and economic research and state planning agencies. The number of indicator series published increased sharply during the 1970s, in part as a response to the

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Work on the Minnesota Economic Indicators project was carried out under contract with the Research and Statistics Office of the Minnesota Department of Jobs and Training.

1/ Professor Wilbur Maki and Research Assistant Peter Stenberg respoectively in the Department of Agriculture and Applied Economics, University of Minnesota.

increasing severity of the general business cycle on state and local economies.

Most state and local economic indicators are confined to employment and unemployment, earnings and income, population and labor force, and state and local revenues and expenditures. For some metropolitan areas, a consumer price index is computed, as well as selected financial series such as bank deposites and loans. Building permit data is collected also, which includes the value of construction.

Paul Kozlowski (1988), in a study of 19 published composite indexes of leading indicators (ILI), divided the various indicators series into seven groups: regional labor market conditions, regional investment conditions, regional financial conditions, national investment conditions, and national demand conditions. The number of indicators used in the composite indexes varied from three to 11. The indexes are heavily dependent on the regional labor market conditions group; few use any national indicators.

Current Minnesota monthly and quarterly indicators of economic activity reported in the Minnesota Labor Market Review parallel corresponding U.S. data series published regularly by the U.S. Bureau of Labor Statistics and the U.S. Department of Commerce.

University staff in several areas in Minnesota also compile business indicators for their localities. A set of indicators for the Mankato Area (Mankato Area Business and Economic Review) is prepared by the Breau of Business and Economic Rasearch at Mankato State University. Economic indicators for Winona County are part of a quarterly reprt on the La Crosse Area (La Crosse Area Business and Economic Review) put out by the University of Wisconsin-La Crosse. The Duluth Business Index (Duluth Business Indicators) produced by the Breau of Business and Economic Research at the University of Minnesota has been around for approximately 20 years and provides a monthly coincident measure of economic activity.

Minnesota Economic Indicators

Employment and unemployment statistics alone can not explain important economic changes in an area, particularly when the sampling errors associated with estimates are likely to be significantly large. The staff of the Research and Statistics Office of the Minnesota Department of Jobs and Training and the authors felt strongly the need for the development of composite indicators for the state and the Twin City metropolitan area. Work on this project was carried out in cooperation with the Minnesota Department of Jobs and Training under the guidance of an advisory committe established for this purpose.

The new Minnesota monthly indicator series, available now for the first time, begins in 1970 and is a mixture of national and local indicators. A similar indicator series exists for the Twin Cities Metropolitan Area, but is not discussed here. Methodologies for state and area indicators generally are similar to procedures used by the U.S. Bureau of Economic Analysis for the national indicator series (see: Survey of Current Business, November 1987).

Reference Cycle

The seasonally adjusted nonagricultural wage and salary employment series is used as the reference cycle in this study. The advantages of this series are that it is an aggregate measure of economic activity, it is readily available, and it is simple to use. The Minnesota reference cycle, for example, clearly shows the turning points in the U.S. business cycle

Table 1. US Business and Minnesota Reference Cycles, 1960-1988

Trough		Peak	
US	MN	US	MN
--	--	Apr 1960	Sept 1960
Feb 1961	Feb 1961	Dec 1969	Mar 1970
Nov 1970	Feb 1971	Nov 1973	Aug 1974
Mar 1975	Apr 1975	Jan 1980	Jan 1980
July 1980	Aug 1980	July 1981	Mar 1981
Nov 1982	Aug 1982	--	--

listed in Table 1.

Coincident Index

The Minnesota index of coincident indicators (ICI) is made up of three components: 1) Seasonally adjusted nonagricultural wage and salary employment, 2) seasonally adjusted retail trade volume in constant 1987 dollars, and 3) total weekly manufacturing hours. Manufacturing employment is also a good coincidental indicator, but it is not included because it is part of nonagricultural wage and salary employment.

As can be seen on Chart 1, the index hits its lowest index value (67) in 1970, reached 100 in 1978 (although 1982 was set at 100) and was near 130 in April 1988. The reference cycle and the composite index are compared in Table 2.

Leading Indicator Index

The Minnesota index of leading indicators (ILI) consists of five seasonally aduusted components: 1) U.S. money supply, 2) manufacturing average weekly earnings, 3) new business incorporations, 4) average weekly initial unemployment claims (inverted), and 5) building permit and public contracts for housing units. The trend of the index is adjusted to the trend of the coincident index. The Minnesota index reached its lowest value (86) during 1970, hit 100 in 1973 and again in 1976, 1981, and 1982 as shown in

Table 2: Turning Points of Minnesota Coincident Index (1970-1988)

Trough	Difference[1]	Peak	Difference[1]
Feb. 1971	0	Aug. 1974	0
April 1975	0	Oct. 1979	+3
Aug. 1980	0	Apr. 1981	-1
July 1982	-1	--	--

1/. Number of months separating the turning points in the coincident index and the reference cycle. Positive indicates ahead, negative behind, and zero indicates matching.

Chart 1. Minnesota Index of Leading Indicators (MILI) and
Minnesota Index of Coincident Indicators (MICI), 1970-88

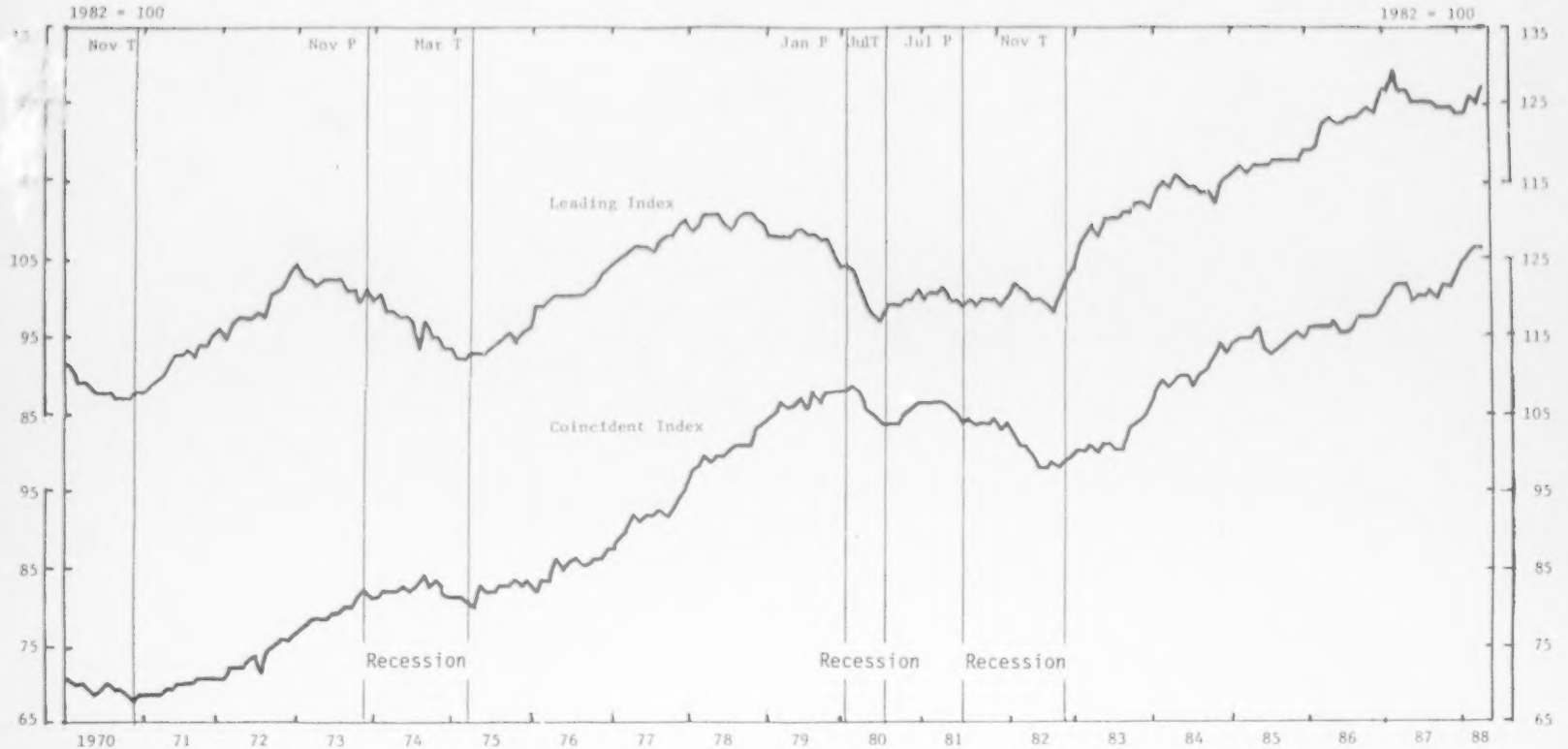


Table 3: Turning Points of Minnesota Leading Indicator Index

Trough	Lead (in months)	Peak	Lead (in months)
Feb. 1970	+9	Dec. 1972	+20
Feb. 1975	+2	Sept. 1978	+16
June 1980	+2	Oct. 1980	+5
Feb. 1981	+17		

Figure 2. The 1987 and 1988 values show slowing growth with the index approaching 130. The relationship between the leading indicator index and the reference cycle can be seen in Table 3. The index consistently leads reference cycle turning points with the lead varying from two to 20 months.

Using Economic Indicators

A good deal of subjective analysis is part of using any leading indicator index. The Minnesota leading index is not as smooth as the coincidence index, and the 1980s are a particular problem. The double recession at the beginning of this decade makes the index series somewhat difficult to interpret. The problem arrises from the short time span between recessions, and the erratic behavior of the Minnesota economy since the last recession. Nevertheless, the leading indicator index clearly shows an overall growth trend since the last recession that is consistent with the Minnesota and U.S. reference series.

Selected References

"Composite Indexes of Leading, Coincident, and Lagging Indicators," Survey of Current Business, Nov. 1988, pp. 24-28.

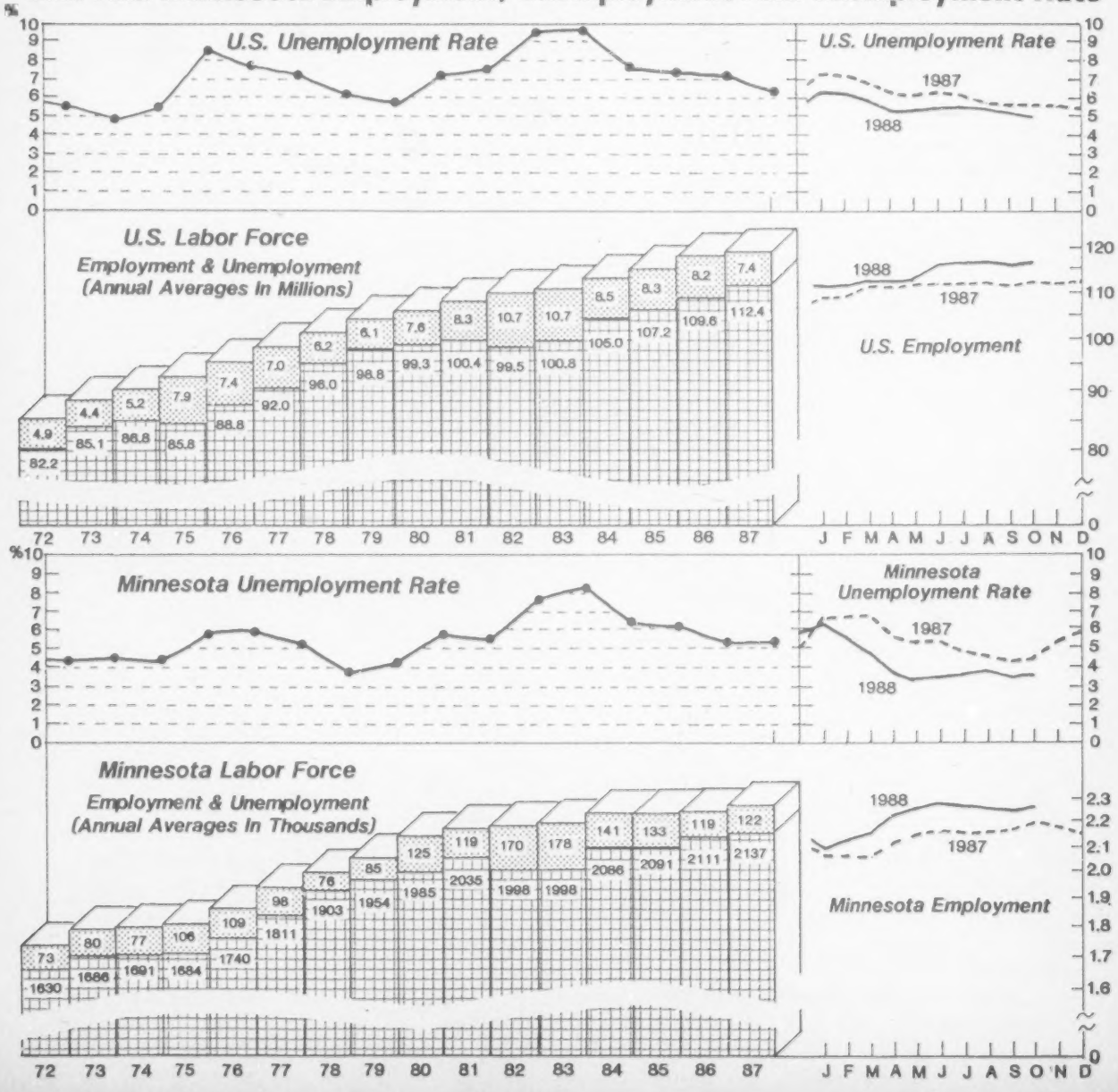
Kozlowski, Paul J., "Forecasting with Leading Indicators: Regional Economic Sense or Nonsense?" paper presented at the MidContinent Regional Science Association Meetings, June 1988.

Statistical Section

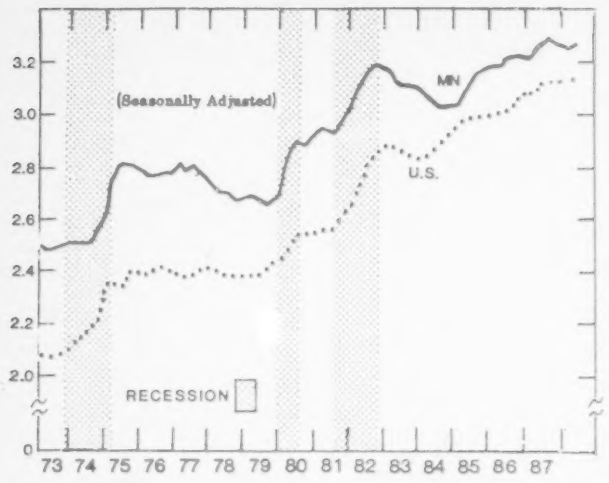
Labor Force Estimates *	MINNESOTA (Numbers in Thousands)			UNITED STATES (Numbers in Millions)		
	October 1988	Change From		October 1988	Change From	
		Last Mo.	Year Ago		Last Mo.	Year Ago
Civilian Labor Force	2,357.6	11.0	64.1	122.4	0.6	1.7
Employed	2,271.6	5.7	76.8	116.3	0.8	2.4
Unemployed	86.0	5.3	-12.6	6.2	-0.2	-0.7
Unemployment Rate						
Actual	3.6	0.2	-0.7	5.0	-0.2	-0.7
Seasonally Adjusted	n.a.	n.a.	n.a.	5.3	-0.1	-0.7

*Components may not add to Civilian Labor Force due to rounding

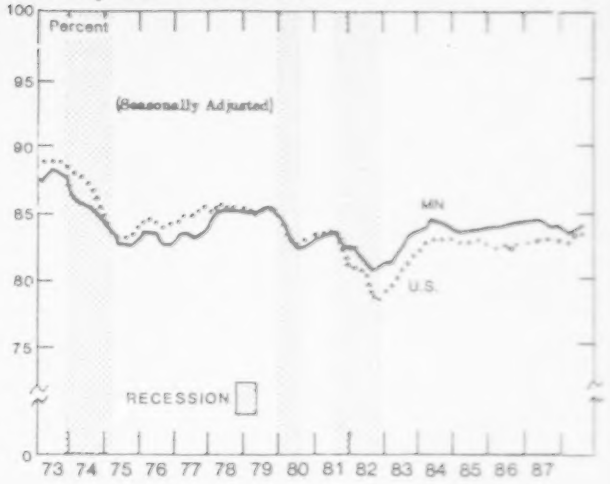
U.S. And Minnesota Employment, Unemployment And Unemployment Rate



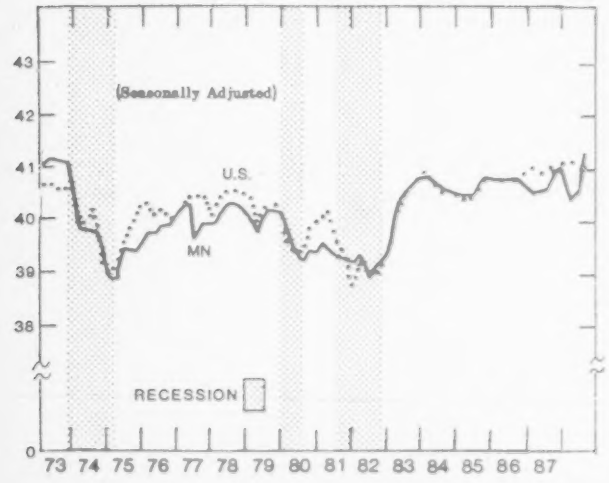
Ratio of Services to Goods Producing Jobs



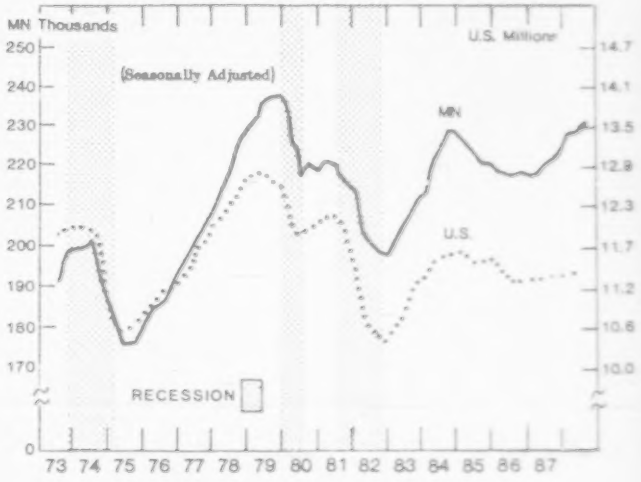
Manpower Utilization Rate



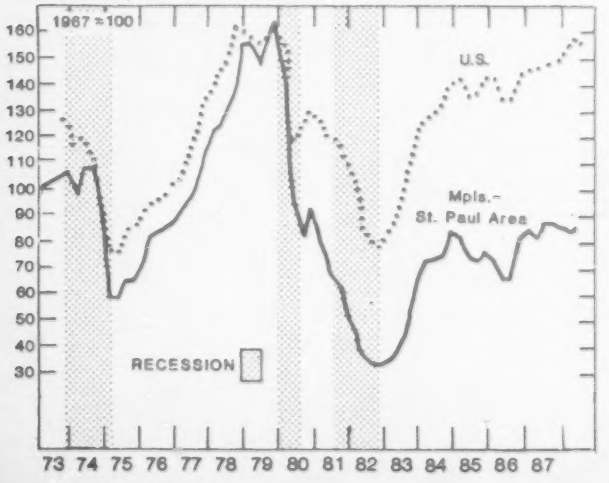
Average Weekly Hours, Manufacturing



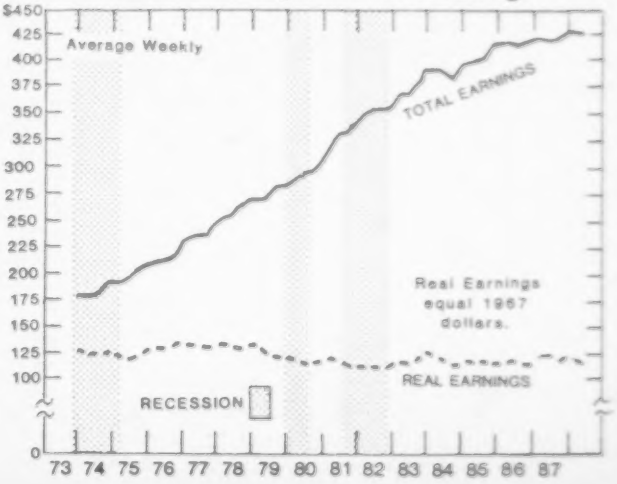
Manufacturing Employment, Durable Goods



Conference Board Help Wanted Index



Minnesota Earnings, Manufacturing



Unemployment Insurance Claimaints in Minnesota

Characteristics	THIRD QUARTER 1988			OCTOBER 1988			
	Number	Percent Change From		Number	Percent Change From		Percent Long Term
		Last Qtr.	Year Ago		Month Ago	Year Ago	
By Age & Sex							
Male	13,383	-34.9	-5.4	12,945	6.5	1.8	18.7
Under 45	9,957	-34.8	-6.0	9,685	7.8	1.0	17.5
16-24	1,332	-39.0	-13.9	1,392	17.6	-5.0	13.1
25-34	5,009	-35.5	-7.6	4,830	8.5	-1.7	16.6
35-44	3,616	-32.2	-0.1	3,463	3.4	8.1	20.5
45 and Over	3,426	-35.2	-3.8	3,260	2.8	4.3	22.1
45-54	2,023	-34.2	-3.7	1,970	4.9	5.3	19.3
55 and Over	1,403	-36.7	-4.0	1,290	-0.3	2.7	26.3
Female	9,999	4.1	-7.0	8,293	0.1	-3.3	27.4
Under 45	7,225	4.3	-6.8	6,091	1.2	-4.2	26.1
16-24	950	-7.0	-14.0	891	11.0	-7.4	16.8
25-34	3,506	5.5	-8.3	3,026	2.8	-2.9	26.9
35-44	2,769	7.4	-2.0	2,174	-4.2	-4.6	28.9
45 and Over	2,774	3.4	-7.4	2,202	-2.8	-0.6	31.0
45-54	1,664	4.0	-7.2	1,335	-2.5	-2.6	29.6
55 and Over	1,110	2.4	-7.8	867	-3.3	2.5	33.1
By Industry	23,382	-22.5	-6.1	21,238	3.9	-0.2	22.1
Ag., For., Fish.	266	-37.9	7.7	239	21.9	-7.0	18.5
Mining	38	-84.2	-87.5	51	15.9	-58.5	9.1
Construction	3,240	-61.9	8.5	3,109	9.2	-3.1	10.5
Manufacturing	5,816	-15.7	-15.8	5,752	8.5	1.0	19.6
Pub. Utilities	1,048	-23.9	-10.5	941	-1.5	0.4	21.3
Wholesale Trade	1,890	-1.6	5.6	1,813	-1.5	15.4	27.2
Retail Trade	2,879	-10.6	-11.2	2,508	1.7	-4.5	26.1
Fin., Ins., Real Est.	1,181	-9.9	0.5	1,114	2.4	-9.8	31.7
Services	5,851	10.5	-5.0	4,485	-0.7	-3.7	29.3
Public Admin.	380	-8.0	-20.5	471	29.8	-23.0	15.1
Inf. Not Available	793	43.1	77.4	755	-7.9	109.1	10.7
By Occupation	23,382	-22.5	-6.1	21,238	3.9	-0.2	22.1
Prof., Tech., Mgr.	6,090	11.1	-2.6	5,308	-0.0	1.7	30.4
Clerical	3,648	6.8	-6.8	3,251	0.5	-3.4	27.8
Sales	1,219	-5.3	-6.6	1,142	0.8	-2.1	26.9
Services	1,760	-2.7	-9.2	1,539	7.8	-5.5	23.3
Farm., For., Fish.	191	-52.4	13.0	187	18.4	-19.4	13.5
Processing	748	-44.1	-32.4	748	4.8	-10.0	11.7
Machine Trade	1,291	-10.5	-12.4	1,347	9.8	10.6	17.3
Benchwork	1,937	-5.7	-13.4	1,757	13.1	0.7	21.7
Structural Work	3,718	-57.6	6.2	3,543	10.4	-0.3	10.8
Misc.	2,555	-35.8	-10.4	2,199	-2.5	1.0	16.3
Inf. Not Available	225	12.5	41.5	217	0.0	45.6	18.4
By Duration	23,382	-22.5	-6.1	21,238	3.9	-0.2	
0-14 Weeks	18,190	-14.0	-3.5	16,544	5.4	2.7	
15+ Weeks (Long-Term)	5,192	-42.4	-14.3	4,694	-1.0	-9.2	

The above table includes data on those claiming benefits from the regular state program. Federal employees and veterans are excluded, and recipients of benefits from extended programs are reported only when those programs are in effect.

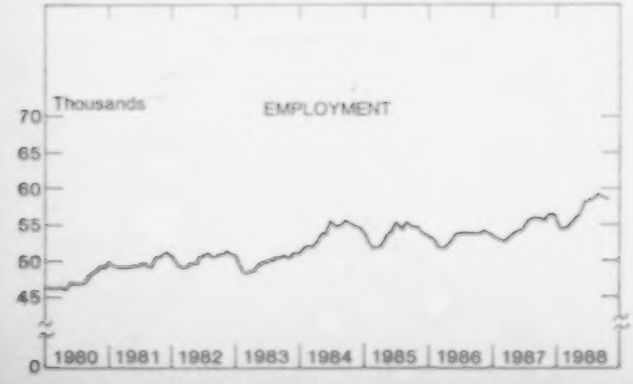
Employment and Unemployment Rates for MN Metro Areas

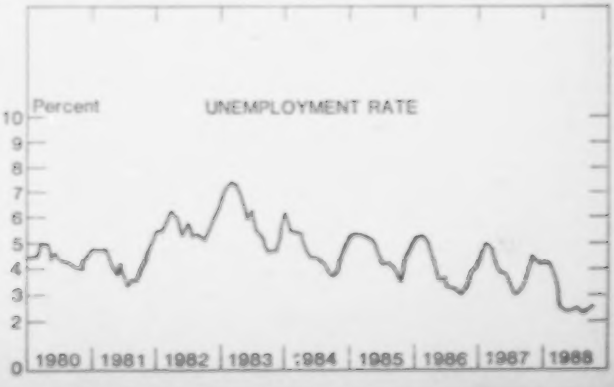
Minneapolis-St. Paul MSA

St. Cloud MSA

Duluth City

Rochester MSA



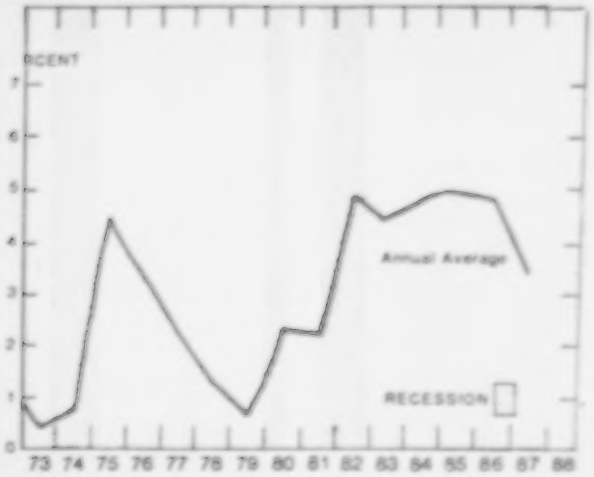


National Spending, Output, Income, and Prices

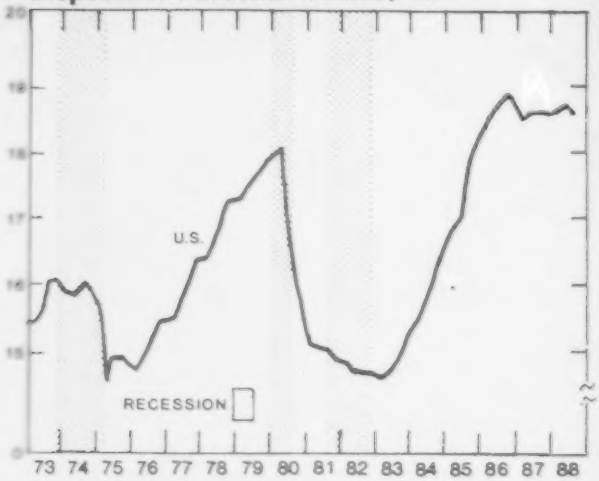
Type of Economic Activity	United States		
	III QUARTER 1988	Percent Change from	
		Last Qtr.	Year Ago
Spending and Output			
Gross National Product (in Billions of 1972 Dollars)	4,007.3	0.6	3.7
Personal Consumption Expenditures	2,601.3	0.9	2.2
Durable Goods	411.0	0.1	1.1
Nondurable Goods	901.7	0.9	1.1
Services	1,288.5	1.1	3.3
Gross Private Domestic Investment	719.7	0.6	7.8
Nonresidential, Fixed	495.7	1.1	7.1
Residential, Fixed	190.2	0.3	-1.0
Net Exports	-94.9	#	#
Government Purchases	781.1	-0.3	-0.2
Federal	326.1	-1.7	-4.7
State and Local	455.0	0.6	3.2
Current Federal Budget Surplus (Deficit)1/	-124.8	-133.3	-138.3
Current Federal Budget Surplus (Deficit) as % of GNP1/	2.5	2.8	3.0
Retail Sales (in millions of dollars)	134,061	1.0	4.5
Industrial Production (Base Year - 1977)	138.2	1.6	5.6
Housing Starts (Annualized in Thousands)	1,454	-1.8	-10.2
Plant Utilization Rates	83.6	0.7	2.9
New Orders - Durable Goods (in millions of dollars)	119,269	0.0	9.6
Income and Credit			
Total Personal Income (in billions of dollars)	4,086.0	1.6	7.5
Total Disposable Personal Income (in billions of dollars)	3,498.9	2.3	8.5
Per Capita Personal Income			
Current Dollars	16,586	1.3	6.5
1982 Dollars	13,926	0.0	2.3
Median Family Income - Family of Four (in dollars)	n.a.	n.a.	n.a.
Poverty Threshold for Family of Four (in dollars)	11,650	n.a.	4.0
Average Weekly Earnings of Production Workers in Mfg.	417.53	0.3	3.4
Money and Credit			
Money Supply (M2) (in billions of dollars)	3,030.8	0.9	5.6
Federal Reserve Discount Rate	6.29	4.8	11.3
Prime Rate Charged by Banks	9.71	10.6	15.6
Consumer Installment Credit as % of Disp. Pers. Income	18.6	0.0	0.5
Prices			
Consumer Price Index (All Urban Consumers 1982-84=100)	119.1	1.4	4.1
Food	119.4	2.0	4.8
Housing	119.5	1.4	3.7
Apparel	114.4	-1.4	4.0
Transportation	109.4	1.4	2.8
Medical Care	139.9	1.7	6.6
Personal Care	119.5	0.7	3.4
Producer Price Index	108.0	1.3	4.1
Finished Goods	107.2	1.5	2.7
Raw Materials	97.2	0.7	1.1

Percent change not applicable
1/ Represents values - not percent change.

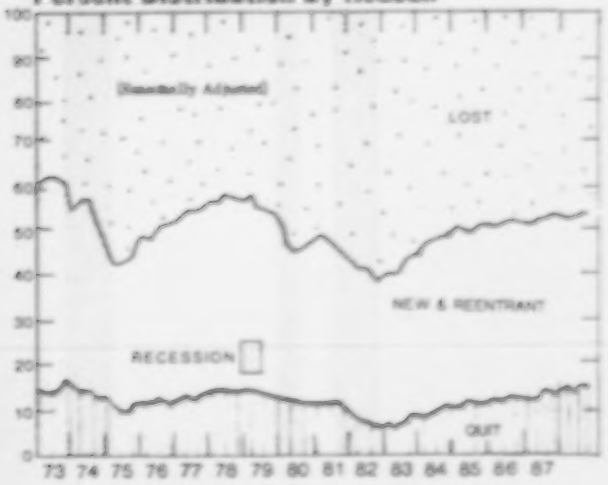
Federal Deficit as % of GNP (Current Dollars)



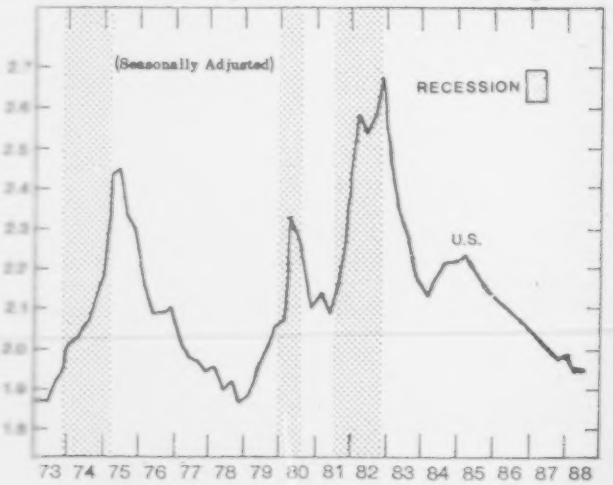
Ratio, Consumer Installment Debt to Disposable Personal Income, U.S.



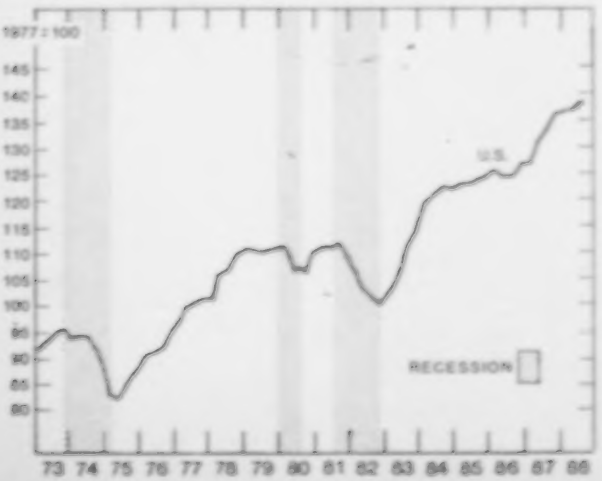
U.S. Unemployment: Percent Distribution by Reason



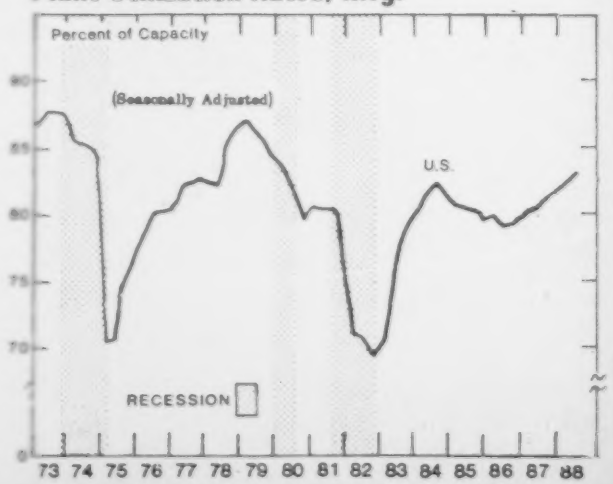
Ratio, Inventory to Sales, Durable Mfg.



Index of Industrial Production



Plant Utilization Rates, Mfg.



INTRODUCING TWO NEW PUBLICATIONS:

I

MINNESOTA EMPLOYMENT OUTLOOK TO 1993

Minnesota Employment Outlook to 1993 gives the growth prospects for over 400 occupations and close to 100 industries in the state of Minnesota. This edition updates information previously produced for the year 1990, due to recent changes in the economy and in occupational staffing. It is a valuable source on how many jobs of different types will likely be created over the next several years, as well as how many openings willl result from individuals leaving the labor force. Special tables and graphics aid the reader in highlighting key occupations and industries, comparing Minnesota to the U.S., and relating occupational demand to educational requirements. This publication will be followed later in the year by others focusing on the employment outlook in different regions of the state.

II

MINNESOTA EMPLOYMENT

Minnesota Employment summarizes and analyzes the large quantity of labor market data and other economic information which is collected by the Research and Statistics Office of the Minnesota Department of Jobs and Training. Several other publications from this office present raw data or deal with a specific labor market topic. Minnesota Employment combines employment information and related subjects in a short, objective assessment of current conditions and major trends. Specifically, this report features the following topics: discussion on labor force and employment trends; wages, prices, and income; employment conditions and employment outlook; and problems facing dislocated workers and other unemployed persons. Generous use of charts and maps enables the reader to digest the many facts easily.

Both publications will be available by January 31, 1989. Single copies of each can be ordered free of charge (while the initial supply lasts) by calling or writing the following:

Research and Statistics Office
Minnesota Department of Jobs and Training
390 North Robert Street
St Paul, Minnesota 55101
(612)296-6545

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Minnesota Labor Market Review

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Minnesota Nonagricultural Wage and Salary Employment, Hours, and Earnings, January, 1980 - December, 1987 (April 1988)

Employment, Hours, and Earnings, 1950-1988, Minneapolis-St. Paul Area (May 1988)

Important Minnesota Occupations by Industry (April 1988)

1986 Occupational Employment Statistics in Minnesota (January 1988)

1984 Occupational Employment Statistics in MInnesota (October 1985)

1988 Minnesota Salary Survey (November 1988)

1988 Minnesota Hospitals and Nursing Homes Salary Survey

1988 MInnesota Salaries by Industry and by Employer Size

Minnesota Employment and Wages by Economic Region and County (First-Fourth Quarters 1987)
Limited number available for 1975-1986

Minnesota Average Covered Employment and Wages by Economic Region for the Calendar Year 1987
(also available for 1976-1986)

Report on Permanent Mass Layoffs and Plant Closings in Minnesota (July 1988)

State and Area Labor Force Estimates January, 1980 - December, 1987

Minnesota Employment